SCIENCE RESPONSE TO INFORMATION REQUESTS SUBMITTED TO THE ENBRIDGE PIPELINE PROJECT ENVIRONMENTAL IMPACT ASSESSMENT HEARINGS RESPECTING PACIFIC NORTH COAST INTEGRATED MANAGEMENT AREA (PNCIMA)

Context

Fisheries and Oceans Canada's (DFO) Environmental Assessment and Major Projects Division (EAMP), Pacific Region, requested that DFO Science, Pacific Region, on May 15, 2012, provide information regarding specific Information Requests (IRs) submitted to the Enbridge Review Panel that DFO Science has the expertise to evaluate. As the IRs for which Science advice was requested cover a range of issues and scientific disciplines, separate Science Responses have been developed for each category of IRs, and in some cases specific IRs. In addition to science related questions, some IRs included elements that were questions pertaining to DFO policy, management or legal information. This Science Response addresses the scientific elements of the following questions:

- Please provide the titles of these additional reports *[reports respecting the identification of Ecologically and Biologically Significant Areas]*, as well as a description of the content of each report.
- Please provide a detailed listing of the ecologically and biologically significant areas addressed within the PNCIMA.
- Please explain where within the proposed footprint of the proposed project these ecologically and biologically significant areas occur.
- Please explain what the reports referred to by DFO address with respect to the seasonal habitat utilization of species and life stages within the Kitimat River alley, Kitimat Arm and Douglas Channel.

This Science Response report is from the Fisheries and Oceans Canada, Canadian Science Advisory Secretariat, Regional Science Special Response Process (SSRP) of May 29th, 2012 on the Science advice in response to information requests submitted by Intervenors to the Enbridge Northern Gateway pipeline project environmental assessment Panel Review Process. Additional publications from this process will be posted as they become available on the Fisheries and Oceans Canada Science Advisory Schedule at www.dfo-mpo.gc.ca/csas-sccs/index-eng.htm.

Background

The Enbridge Northern Gateway Project proposes to ship dilute bitumen from Kitimat, British Columbia to markets in China and California with tankers of the class Very Large Crude Carriers (VLCC) (Vol. 1, B1-2, Enbridge Northern Gateway Project Section 52 Application). The tanker route from Kitimat through confined waterways in British Columbia and then into open waters of Hecate Strait, Dixon Entrance and Queen Charlotte Sound in British Columbia are illustrated in

Figure 1. For assessment purposes Enbridge Northern Gateway defines two areas, the Confined Channel Assessment Area (CCAA) (Figure 2) and the Open Water Assessment Area (OWA) which is BC waters to the territorial sea limit (Figure 1). Incoming ships will deliver cargoes of condensate. Enbridge Northern Gateway estimate 71 condensate and 149 oil tankers call in at the Kitimat terminal for a total of 440 transits per year (Vol. 8C, B3-37, Enbridge Northern Gateway Project Section 52 Application). A marine terminal will be constructed near Kitimat with two tanker berths and one utility berth (Vol. 1, B1-2, Enbridge Northern Gateway Project Section 52 Application).

Two IR submissions were made to the Joint Review Panel (JRP) by DFO. Enbridge Northern Gateway provided responses to requests for information in the IRs. Since then intervener review of the Environmental Assessment documents prepared by the proponent (Enbridge Northern Gateway) and of the IRs and the responses by the proponent has resulted in a series of further questions to DFO by interveners.

On February 7 and 8, 2012 a Pacific Regional Advisory Process was conducted by the DFO at the Pacific Biological Station in Nanaimo, B.C. to provide an 'Evaluation of proposed ecologically and biologically significant area in marine waters of British Columbia'.

The objective of that science advisory process was to identify ecologically and biologically significant areas (EBSAs) in Canadian Pacific marine waters, specifically the Strait of Georgia, west coast of Vancouver Island, and the Pacific North Coast Integrated Management Area (PNCIMA). It was not the objective of this advisory process to review the specific methods for identifying ecologically and biological significant areas; these have been reviewed as part of national DFO advisory processes (DFO, 2004; 2011).

To achieve this objective, meeting participants were asked to address the following:

1. Identify EBSAs in the Strait of Georgia, west coast of Vancouver Island, and Pacific North Coast Integrated Management areas, using the best available information and the criteria defined by DFO (DFO, 2004);
2. For the EBSAs identified in each area:
    - Provide justification outlining why the identified EBSAs are considered ecologically or biologically significant, including their strengths and limitations; and
    - Indicate the level of confidence in the delineation of the identified EBSAs, and sources of additional data that might be available to incorporate into future databases for these areas, as well as any sources of uncertainty;
3. Provide maps indicating the locations of the identified EBSAs in the Strait of Georgia, west coast of Vancouver Island, and Pacific North Coast Integrated Management areas;
4. Identify best practices for archiving, maintaining and updating databases, and potential next steps to improve the identification of EBSAs in these regions.

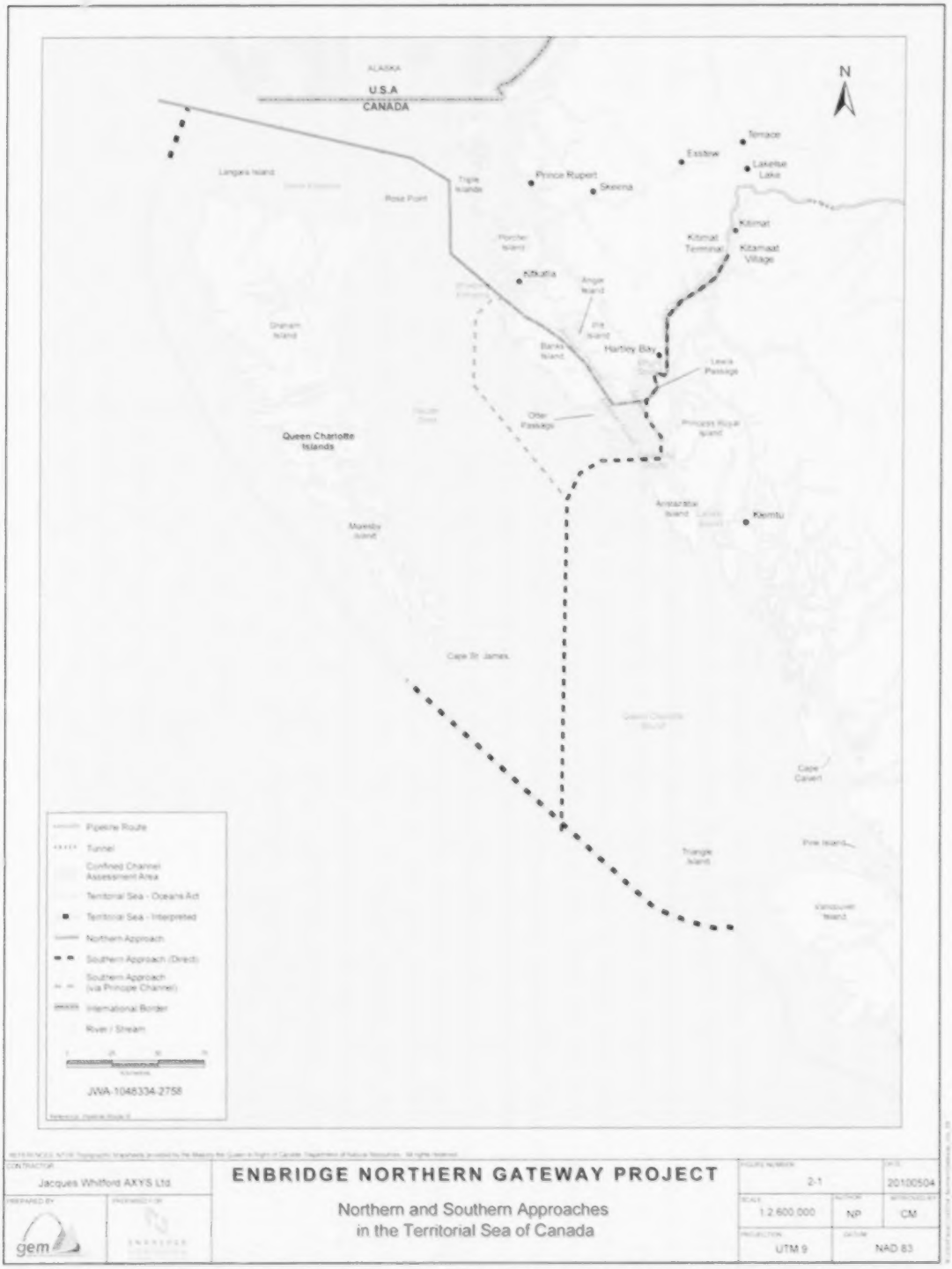

Figure 1. Map illustrating the proposed tanker routes through the Confined Channel and Open Water Assessment Areas (CCAA and OWA). The OWA extends to the territorial sea boundary (from Volume B9-42 Enbridge Northern Gateway Project).

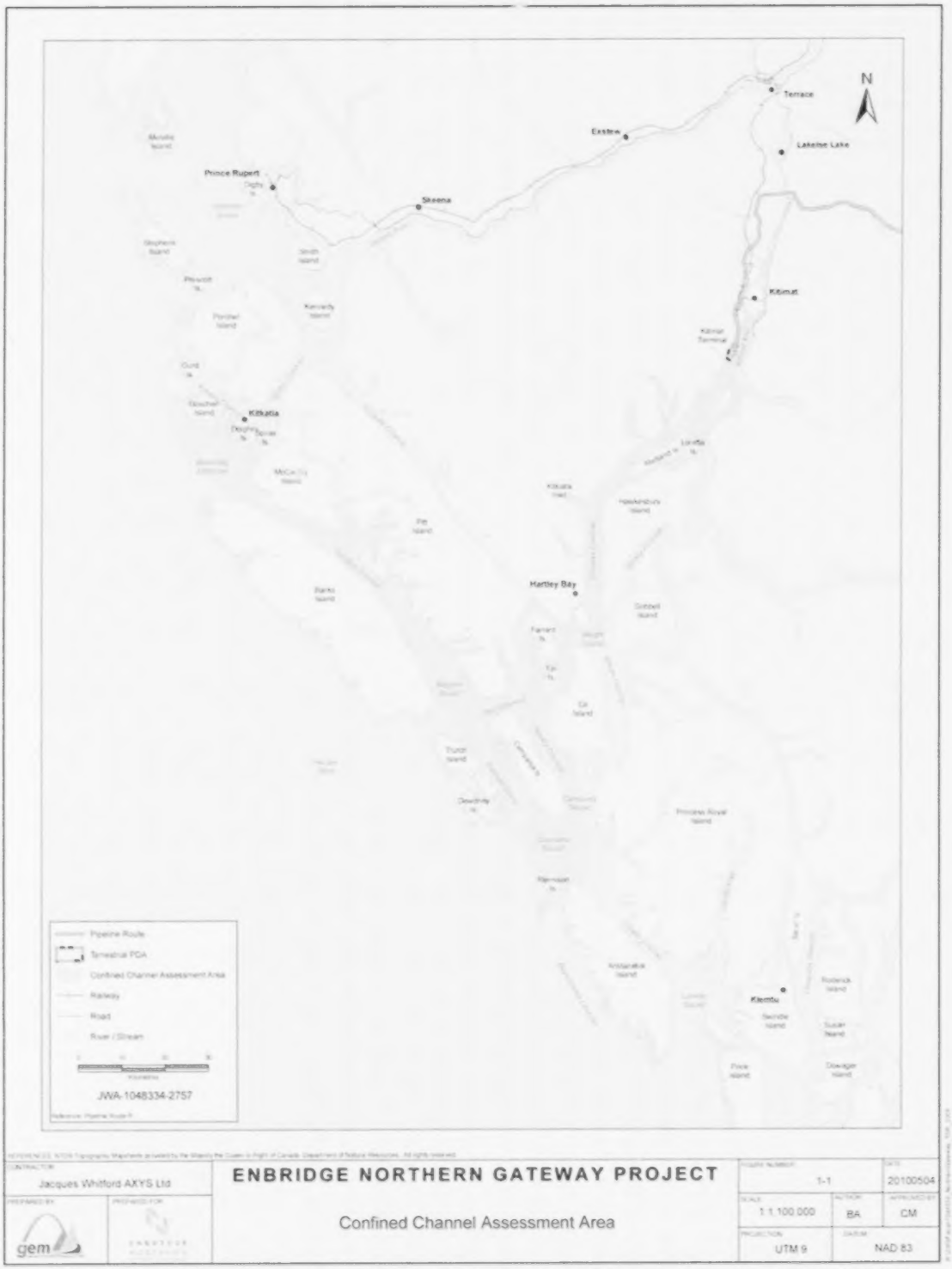

Figure 2. Map illustrating the location and extent of the Confined Channel Assessment Area (CCAA) (from Volume 8B Enbridge Northern Gateway Project Section 52 Application).

Analysis and Responses

Based on the outcome of the science advisory process, four new reports are currently being prepared: one Science Advisory Report, one Proceedings Report, and two revised research documents. Two technical reports, published in 2006 and currently available, were also used as a basis for identifying EBSAs in the PNCIMA ecoregion. Details are as follows:

Science Advisory Report:

DFO. *In prep.* Evaluation of proposed ecologically and biologically significant areas in marine waters of British Columbia. DFO Can. Sci. Advis. Sec. Sci. Advis. Rep.

This report, which is currently in draft form, will summarize all of the EBSAs currently identified, describe how the EBSAs meet the EBSA criteria as outlined in DFO (2004), and provide the level of confidence associated with each EBSA.

Proceedings Report:

DFO. *In prep.* Proceedings of the Pacific Regional Advisory Process on Evaluation of Proposed Ecologically and Biologically Significant Areas in Marine Waters of British Columbia, 7-8 February 2012. DFO Can. Sci. Advis. Sec. Proceed. Ser.

This report, which is currently in draft form, will summarize the key discussions and issues that were raised during the course of the workshop.

2012 Research Documents:

Jamieson, G, Levesque, C. Identification of ecologically and biologically significant areas in the Strait of Georgia and off the west coast of Vancouver Island: Phase I – Identification of Important Areas. *CSAP Working Paper 2012/P51.*

This report, which is currently under revision, summarizes the important areas (IAs) identified for each of the key taxonomic groups in the Strait of Georgia and off the west coast of Vancouver Island. The report also identifies important areas in the PNCIMA ecoregion that were not previously identified in the two technical reports published in 2006 (see details below).

Jamieson, G. and Levesque, C. Identification of ecologically and biologically significant areas on the west coast of Vancouver Island and the Strait of Georgia ecoregions, and in some nearshore areas on the North Coast: Phase II – Designation of EBSAs. *CSAP Working Paper 2012/P58.*

This report, which is currently under revision, summarizes all of the EBSAs identified for the Straight of Georgia and west coast Vancouver Island ecoregions, as well as new EBSAs identified for PNCIMA ecoregion that were not previously identified in the technical reports published in 2006 (see details below).

2006 Technical Reports:

Clarke, C.L., and Jamieson, G.S. 2006a. Identification of ecologically and biologically significant areas in the Pacific North Coast Integrated Management Area: Phase I – Identification of important areas. Can. Tech. Rep.Fish. Aquat. Sci. 2678: vi + 89 p.

This report summarizes most of the important areas (IAs) identified to date for each of the key taxonomic groups in the PNCIMA ecoregion. The workshop participants noted that some IAs were out of date and recommended that the database of IAs and corresponding maps be updated. Additional IAs were described in the 2012 research documents.

Clarke, C.L., and Jamieson, G.S. 2006b. Identification of ecologically and biologically significant areas in the Pacific North Coast Integrated Management Area: Phase II – Final Report. Can. Tech. Rep. Fish. Aquat. Sci. 2686: v + 25 p.

This report, currently available, summarizes most of the EBSAs identified to date for PNCIMA ecoregion. Additional EBSAs were proposed in the 2012 research documents (see details above).

The nearshore ecologically and biologically significant areas are still under revision as part of the completion of the above noted peer review process and cannot be provided at this time.

Maps of the biologically and ecologically significant areas are provided in the Clarke and Jamieson (2006a, b) reports but these are under revision in the newer draft documents. Maps outlining these areas are currently being updated and will be provided in the EBSA reports.

The noted reports were not intended to provide detailed description of individual life history stages for particular species. Consequently, the reports will be unable to address the issue of seasonal habitat utilization by species within the Kitimat River alley, Kitimat Arm and Douglas Channel, as requested above.

Conclusions

Several documents have been published respecting the identification of biologically and ecologically significant areas for the marine areas in question and details are provided. In addition, several documents are currently being finalized from recent science review processes. These draft documents provide provisionary recommendations regarding the ecologically and biologically significant areas within the regions of interest for the Enbridge development. Quantification of the effects of development on affected species is not possible from the materials in these documents.

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Sources of Information

DFO. 2011. Ecologically and Biologically Significant Areas – Lessons Learned. DFO Can. Sci. Advis. Sec. Sci. Advis. Rep. 2011/049.

DFO. 2004. Identification of Ecologically and Biologically Significant Areas. DFO Can. Sci. Advis. Sec. Ecosystem Status Rep. 2004/006.

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